

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application. Added text is indicated by underlining, and deleted text is indicated by ~~striking through~~. Changes are identified by a vertical bar in the margin.

Listing of Claims:

- 1 1. (canceled)
- 1 2. (canceled)
- 1 3. (canceled)
- 1 4. (currently amended) A method of authenticating disk management
2 | information according to claim ~~3~~ 5, comprising the steps of:
3 sequentially and additionally recording authentication information and
4 invalidating information in the power calibration area on the disk;
5 regarding the management information on the disk as valid if invalidating
6 information is absent after authentication information last recorded on the disk; and
7 regarding the management information on the disk as invalid if invalidating
8 information is present after authentication information last recorded on the disk.
- 1 5. (currently amended) A method of authenticating disk management
2 | information ~~according to claim 3 wherein~~ of a disk using a disk device to certify validity of
3 | management information recorded on the disk comprising the steps of:
4 recording authentication information on the disk on which the management
5 | information is recorded, thereby certifying that the management information is valid;
6 recording invalidating information on the disk on which the management
7 | information and the authentication information are recorded, thereby invalidating certifying

8 effect of the authentication information, the step of recording invalidating information being
9 performed during startup processing by the disk device;
10 recording, during stopping processing of a disk device in which the disk is loaded,
11 authentication information in a power calibration area on the disk if validity of the management
12 information is confirmed, wherein
13 the ~~invalidation~~ invalidating information uses a power calibration pattern recorded
14 in the power calibration area, and if the last recorded calibration pattern is a test pattern, then the
15 disk management information is deemed to be invalid.

1 6. (currently amended) A disk device according to claim 9, comprising:
2 means for recording authentication information in a power calibration area on a
3 disk to certify validity of management information in a recording management area on the disk
4 and invalidating information to invalidate certifying effect of the authentication information, in
5 the power calibration area on the disk on which the management information is recorded; and
6 means for determining whether or not the management information on the disk is
7 valid by confirming the authentication information and the invalidating information on the disk.

1 7. (Previously presented) A disk device according to claim 6, wherein:
2 the authentication information is recorded during the time that stopping
3 processing of the disk device is being performed, if validity of the management information is
4 confirmed; and
5 the invalidating information is recorded, before data recording processing, in
6 response to a data recording request first received after the disk device is started.

1 8. (currently amended) A method of authenticating disk management
2 information according to claim 3 5, wherein the authentication information is a copy of the disk
3 management information, and if the information last recorded in the power calibration area is the
4 same as the disk management information, then the disk management information is deemed to
5 be valid.

9. (new) A disk device comprising:

a disk;

means for recording authentication information on the disk on which the management information is recorded, thereby certifying that the management information is valid;

means for recording invalidating information on the disk on which the management information and the authentication information are recorded, thereby invalidating certifying effect of the authentication information, wherein the recording of invalidating information is performed during startup processing by the disk device;

means for recording, during stopping processing of a disk device in which the disk is loaded, authentication information in a power calibration area on the disk if validity of the management information is confirmed, wherein the invalidating information uses a power calibration pattern recorded in the power calibration area, and if the last recorded calibration pattern is a test pattern, then the disk management information is deemed to be invalid.